

**DOUBLE-LOOP MOTION-COMPENSATION FINE GRANULAR SCALABILITY****RELATED APPLICATIONS**

*09/487756*  
*June 21*  
 [0001] Commonly-assigned, copending U.S. Patent Application, No. *09/487756* entitled  
 "Single-Loop Motion-Compensation Fine Granular Scalability", filed *June 21*, 2001.

*09/450672*  
*August 15*  
 [0002] Commonly-assigned, copending U.S. Patent Application, No. *09/450672* entitled  
 "Totally Embedded FGS Video Coding with Motion Compensation", filed *August 15*, 2001.

**FIELD OF THE INVENTION**

[0003] The present invention relates to video coding, and more particularly to a scalable enhancement layer video coding scheme that employs motion compensation within the enhancement layer for bi-directional predicted frames (B-frames) and predicted frames and bi-directional predicted frames and (P- and B-frames).

**BACKGROUND OF THE INVENTION**

[0004] Scalable enhancement layer video coding has been used for compressing video transmitted over computer networks having a varying bandwidth, such as the Internet. A current enhancement layer video coding scheme employing fine granular scalable coding techniques (adopted by the ISO MPEG-4 standard) is shown in FIG. 1. As can be seen, the video coding scheme 10 includes a prediction-based base layer 11 coded at a bit rate  $R_{BL}$ , and an FGS enhancement layer 12 coded at  $R_{EL}$ .

**09/887,743**

**This application claims benefit of serial number 60/239,661 filed November 12,2000, and claims benefit of serial number 60/234,499 filed September 22,2000.**